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EXAMINER
WOO, RICHARD SUKYOON

ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 12/08/2004

Office Action Summary	Application No.	Applicant(s)	
	10/644,944	JOHN R. ABE	
	Examiner	Art Unit	
	Richard Woo	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 12-11-2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2) Claim 20 is are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: any other data processing system to work with the processor for performing the operations as claimed by the applicant.

3) Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, line 5; Claim 19, line 5; and Claim 20, line 3, respectively, the recitation of "reacting based on the result" renders the claim indefinite because it is not clear how the invention reacts based on the result as claimed by the applicant.

Claim Rejections - 35 USC § 101

4) 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5) Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson,* 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

> The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.,* the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful,

the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, State Street never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, there is no significant recitation of the data processing system or calculating computer for performing data processing operations.

In Claim 19, the computer program itself cannot be directed to a practical application of the invention in the useful art to accomplish a concrete, useful, and tangible result. When the computer program is actually executed by the computer, the

of "operating on a server" cannot constitute the actual execution done by the computer system.

Double Patenting

6) A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7) Claims 1-20, respectively, are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-20 of copending Application No. 10/644,949. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

8) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2)

9) Claims 1-20, as long as they are definite, are rejected under 35 U.S.C. 102(e) as being anticipated by Delurgio et al. (US 6,553,352).

As for Claim 1, Delurgio et al. discloses a method comprising:

generating an optimal price;

identifying a result of utilizing the optimal price; and

reacting based on the result (see Figs. 2-5 and the descriptions thereof).

As for Claim 2, Delurgio et al. further discloses the method including receiving a plurality of prices associated with a price-frequency mathematical distribution, a number of competitors, a business objective, and a cost associated with a good or service; and calculating the optimal price based on the prices, number of competitors, business objective, and cost associated with the good or service (see Figs. 2-21 and the descriptions thereof).

As for Claim 3, Delurgio et al. further discloses the method, wherein the result includes units sold (see Figs. 6-38 and the descriptions thereof).

As for Claim 4, Delurgio et al. further discloses the method, wherein the result includes an income (see Id.).

As for Claim 5, Delurgio et al. further discloses the method, wherein the result includes a cost of goods (see Supra Figs. 6-38).

As for Claim 6, Delurgio et al. further discloses the method, wherein the result includes a gross profit (see Id.).

As for Claim 7, Delurgio et al. further discloses the method, wherein the result includes a sales general and administrative expenses (see Figs. 1-5 and Supra Figs. for optimizing rule).

As for Claim 8, Delurgio et al. further discloses the method, wherein the result includes earnings before income tax for each price (see Supra Figs.).

As for Claim 9, Delurgio et al. further discloses the method including computing a frequency distribution of a plurality of prices (see Supra Figs for optimizing price).

As for Claim 10, Delurgio et al. further discloses the method including adjusting a probability of a customer purchase based on a number of competitors (see Id.).

As for Claim 11, Delurgio et al. further discloses the method including calculating at least one result selected from the group consisting of units sold, a cost of goods, a gross profit, a sales general and administrative expense, and earnings before income tax (EBIT) for the good or service (see Id.).

As for Claim 12, Delurgio et al. further discloses the method including searching the table for the optimal price that optimizes a user-selected business objective (see Supra Figs. and descriptions for optimizing price and comparison thereof).

As for Claim 13, Delurgio et al. further discloses the method, wherein the business objective is selected from the group consisting of maximizing revenue for a good or service, maximizing gross profit, maximizing factory utilization for the good or service, maximizing market share for good or service, and maximizing earnings before income

As for Claim 14, Delurgio et al. further discloses the method, wherein the result includes an expected result (see Supra Figs. and descriptions for optimizing price).

As for Claim 15, Delurgio et al. further discloses the method including comparing the expected result with an actual result (see Id.).

As for Claim 16, Delurgio et al. further discloses the method including determining whether an optimization is required based on the comparison (see Supra Figs. 1-38 and descriptions thereof).

As for Claim 17, Delurgio et al. further discloses the method including if it is determined that the optimization is required, identifying a new price value, wherein the operations are repeated based on the new price value (see Supra Figs. 1-38 and the descriptions thereof).

As for Claim 18, Delurgio et al. further discloses the method, wherein the method is carried out utilizing a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, and a legacy system interface (see Supra Figs.).

As for Claim 19, Delurgio et al. discloses a computer program product comprising:

computer code for generating an optimal price;

computer code for identifying a result of utilizing the optimal prices; and

computer code for reacting based on the result (see Figs. 1-38 and the

As for Claim 20, Delurgio et al. discloses a system including:

a processor for generating an optimal price, identifying a result of utilizing the optimal price, and reacting based on the result (see Supra Figs for optimizing price).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2002/0116348 is cited to show a dynamic pricing system that generates pricing recommendation for each product in each market.

WO 00/52605 is cited to show a business process and computer system that generate an optimum bid or value for a competitively bid good or service.

US 2003/0217016 is cited to show a pricing model that is used by a decision maker in the evaluation of prices of numerous items to multiple customers. The system and method facilitates targeted and strategic pricing decisions that increase profitability and avoid unnecessary risks in pricing changes.

"Dynamic Pricing Revolution" is cited to show a dynamic pricing method and system that fits into an overall business plan and can be applied at every stage of the product life cycle and within varied pricing strategies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Woo whose telephone number is 703-308-7830. The examiner can normally be reached on Monday-Friday from 8:30 AM -5:00

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 703-308-2702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

Richard Woo
Patent Examiner
GAU 3629
November 15, 2004

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